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Imagery Analysis Monthly Review

October 1980

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Imagery Analysis Monthly Review

October 1980

This publication of the Office of Imagery Analysis contains substantive findings and analytical judgments that were derived principally from analysis of imagery. (U)

Comments and queries on the contents of this publication are welcomed. They should be directed to the analyst whose name and secure line extension appear after each article. (U)

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Changes in Artillery Assets in Soviet Divisions Opposite NATO (S)

The Soviets are reorganizing and augmenting their divisional artillery assets in the Groups of Forces opposite NATO. The divisional rocket launcher battalion is being subordinated to the artillery regiment, and a howitzer battalion is being added to the tank regiments of tank and motorized rifle divisions. These changes will increase the number of divisional howitzers in the Groups by 20 to 30 percent and also require additional manpower. Since March 1980, at least 25 of the 30 divisions in the Groups have either reorganized their artillery regiments or augmented their tank regiments or both. Based on the rate of changeover to the new organization, we project that all divisions in the Groups will incorporate both changes by mid-1981. (S [REDACTED])

In tank divisions, the new artillery regiment consists of one 122-mm BM-21 rocket launcher battalion, one 122-mm D-30 towed howitzer battalion, and one 152-mm self-propelled howitzer battalion. This reorganization eliminated one 18-gun towed howitzer battalion from divisional artillery. The new organization facilitates command and control, streamlines logistics, and will partially offset the increase in equipment and manpower required by the tank regiment augmentation. The loss of one howitzer battalion in the artillery regiment and the addition of up to 18 howitzers to each of the three tank regiments will result in a net increase of up to 36 artillery pieces per tank division. (S [REDACTED])

In motorized rifle divisions (MRDs), there is no clear evidence indicating whether the rocket launcher battalion is replacing a howitzer battalion in the artillery regiment or will become a fourth battalion. The tank regiment in the MRDs is also gaining as many as 18 howitzers. (S [REDACTED])

Fifteen divisions with reorganized artillery regiments have been identified in [REDACTED]

[REDACTED] two in the Central Group of Forces (CGF), and one in the Northern Group of Forces (NGF). The reorganization has

not been identified to date either in the Southern Group of Forces (SGF) or in the USSR, except in the experimental tank divisions at Ovruch and Belogorsk. These experimental divisions contain artillery regiments which consist of one rocket launcher battalion and two self-propelled howitzer battalions. We believe that the reorganized artillery regiments currently observed in the Groups of Forces will also eventually receive self-propelled howitzers to replace their towed howitzers. (S [REDACTED])

At least ten divisions [REDACTED] four in the CGF, one in the NGF, and two in the SGF have augmented tank regiments. The addition of artillery assets to tank regiments increases operational flexibility by making the maneuver regiments less dependent on divisional artillery support. (S [REDACTED])

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Modifications to the T-72 Tank (C)

The Soviets have modified the T-72 tank with a new, probably laser, rangefinder and a new type of protective side skirting. Although there has been speculation that T-72 production may soon be suspended in favor of a new tank, these modifications suggest that the T-72 will stay in production for some time. (S [REDACTED])

may be related to the new ranging system. (S [REDACTED])

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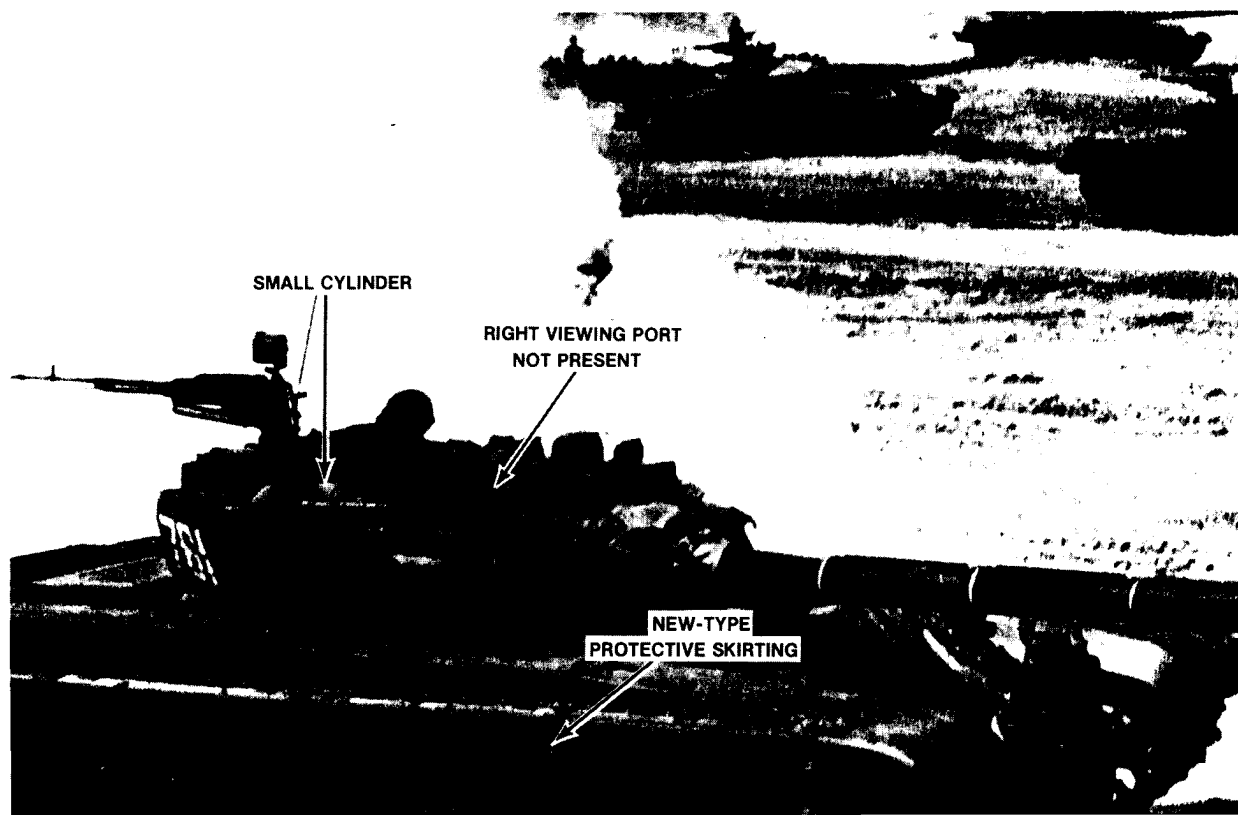
The initial version of the T-72 is equipped with a stereoscopic rangefinder which requires a viewing port on each side of the turret. Photographs of T-72 tanks in the September 1980 issue of the Soviet magazine, *Technics and Armament*, show that there is no viewing port on the right side of the turret, suggesting that a new, improved ranging system has been added—most likely a laser rangefinder. A small cylinder attached to the commander's cupola on the right side of the modified T-72 tank turret

The photographs also show that a new type of protective skirting has been attached along the fenders of the modified T-72. Four panels appear to be hinged to each fender so they can be raised to allow for work on the track and suspension. Skirting plates on the earlier version of the T-72 had to be attached by the crew prior to combat. Although it is doubtful that the new rangefinder would be detectable on satellite imagery, the skirting plates should be observable on high-quality, oblique coverage. (S [REDACTED])

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Modified T-72 Tank (U)

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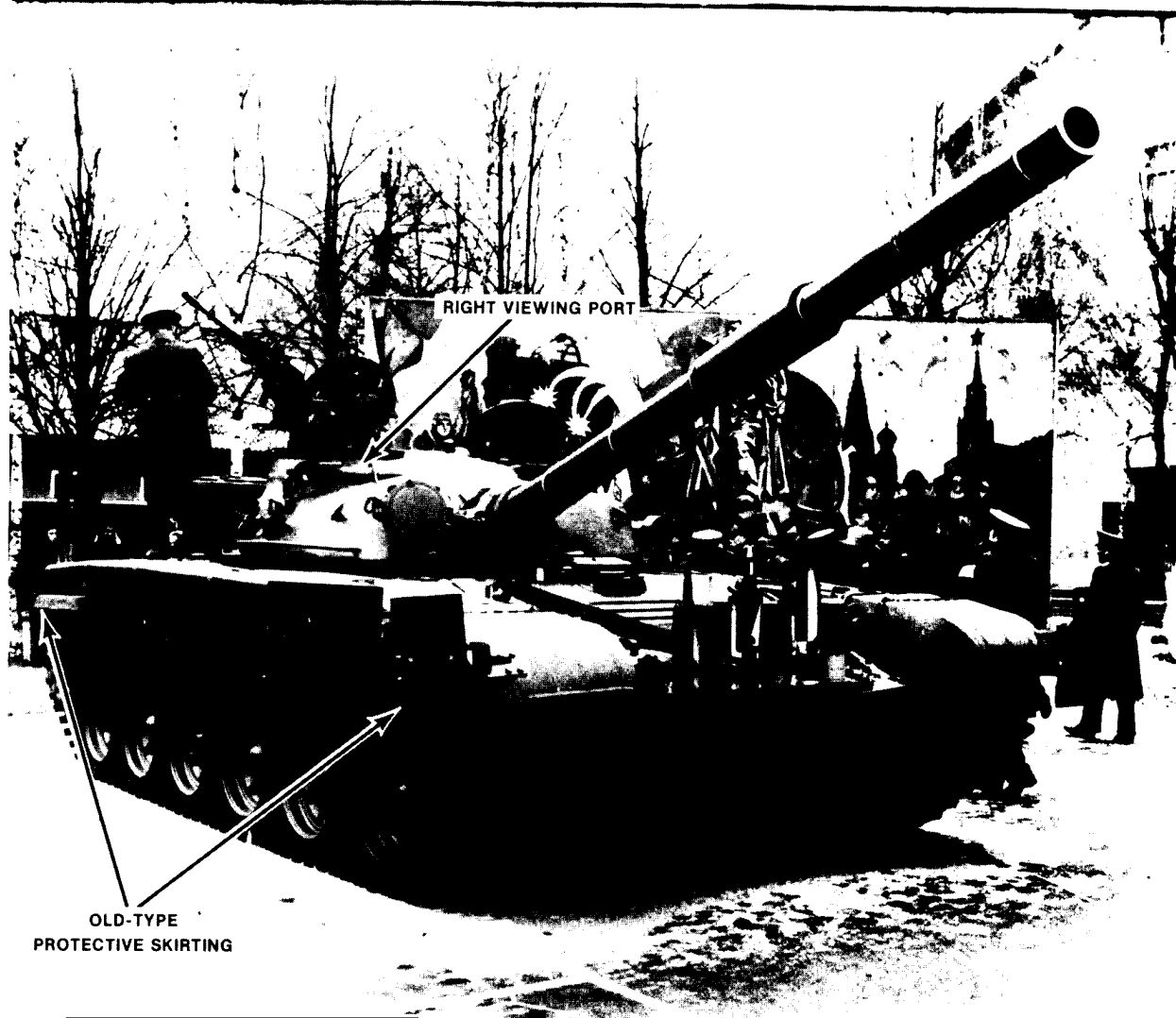
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Standard T-72 Tank (U)



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Backfire Bombers May Carry Four Weapons Racks (S)

The presence of groups of four multistore ordnance rack shipping containers at various Soviet Backfire bomber facilities indicates that the Backfire bomber may be capable of carrying four multistore ordnance racks. Thus far, only two racks have been seen mounted on the aircraft, and it is not clear whether the other two racks would be mounted internally or externally. (S [redacted])

The ratio of four containers to one Backfire aircraft has been observed on the Kazan Backfire production plant flightline on several occasions since the Backfire was first deployed, in mid-1974. [redacted]

[redacted] for example, seven Backfire were undergoing final checkout and four ordnance rack shipping containers were beside one of the Backfire bombers. A group of 24 containers, arranged in groups of four, was located farther down the flightline indicating that all seven aircraft were being fitted with four racks. These seven Backfire aircraft were later deployed to both Long-Range Aviation (LRA) and Soviet Naval Aviation (SNA) bases. (S [redacted])

Ordnance rack shipping containers are seen at all LRA and SNA Backfire bases, but in most cases

they are usually stored in centralized areas consisting of small quonset-type storage buildings and open storage. There are, however, instances in which the containers are stored with the aircraft. Four multistore ordnance rack shipping containers are continually observed in each Backfire parking revetment at the Soviet Naval Aviation base at Oktyabrskoye, and four containers are occasionally seen in individual parking revetments at the other Backfire bases. (S [redacted])

Analysis of the ordnance rack itself from aerial hand-held photography shows that it consists of a load-carrying beam with three sets of triangularly-arranged shackles and that there are nine ordnance positions on each rack. The spacing of the shackles indicates that the ordnance rack could accommodate such weapons as 250- and 500-kilogram bombs and AMD-500 naval mines. (S [redacted])

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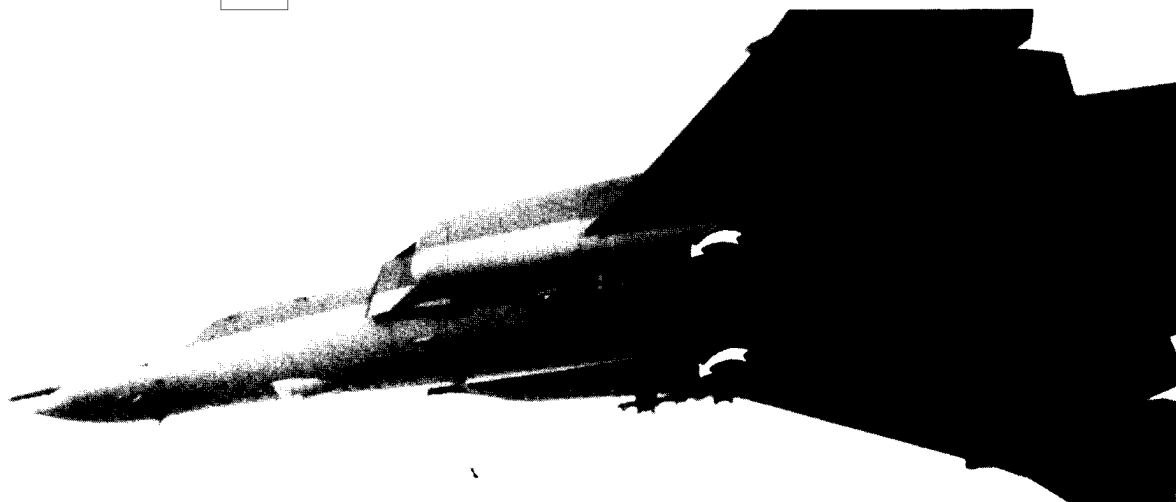
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Multistore Ordnance Racks on Backfire,
26 September 1978 (S [redacted])

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Large Foreign-Built Floating Dry-docks Delivered to the Soviet Union (S)

Three large foreign-built floating drydocks (FDDs) have been delivered to the Soviet Union within the past year. The largest of these FDDs—built in Sweden and capable of lifting 80,000 tons—was delivered to Roslyakova Guba Naval Base near Severomorsk in the Soviet Northern Fleet in mid-September 1980. This is the only drydock in the Northern Fleet area capable of lifting a ship as large as the Kiev-class guided missile V/STOL aircraft carrier—the largest warship currently in the Soviet naval inventory. In addition, two Yugoslav-built FDDs have been delivered to the naval complex at Sevastopol in the Black Sea Fleet area. The first of these was delivered in early October 1979 and the second in early September 1980. The first has been in service since mid-August 1980, and the second could be in service by the end of 1980 or early 1981. Each dock is estimated to be capable of lifting 30,000 tons, large enough to service all surface combatants—except Kiev-class carriers—in the Black Sea Fleet. (S [redacted])

also part of the naval complex at Sevastopol. The graving dock has been out of service since early 1979 for modification work that will probably take several more years to complete. Many of the functions previously performed in the graving dock can now be accomplished with the two FDDs. In addition to providing maintenance and overhaul facilities for the surface combatants of the Black Sea Fleet, the two FDDs could perform minor maintenance work on newly constructed warships—built at Black Sea facilities—as they prepare for and return from their initial sea trials. Because these docks are not capable of servicing Kiev-class carriers, docking facilities for the Kiev-class will not be available in the Black Sea until modification of the Panaiotova Bay graving dock is completed. (S [redacted])

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Delivery of the Swedish-built FDD was originally attempted in October 1979, but a storm in the Barents Sea caused the dock to be run aground and severely damaged. The drydock was then refloated and taken to Norway, where it underwent repairs for nearly a year. It is similar to a Japanese-built FDD delivered to Dunay Submarine Base and Shipyard Razboynik Bay in the Soviet Pacific Fleet in October 1978. Like the Japanese-built FDD, it is about 330 meters long, is equipped with two side-wall cranes, and is estimated to be capable of lifting 80,000 tons. Besides being able to accommodate a large warship such as the Kiev-class carrier, each drydock is capable of accommodating two nuclear-powered ballistic missile submarines (SSBNs) simultaneously. If the Swedish-built drydock is used like the Japanese-built FDD at Razboynik Bay, it will be used to service both large surface combatants and SSBNs. (S [redacted])

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The Soviets may have acquired the two Yugoslav-built FDDs to compensate for the loss of service of the large graving dock at Panaiotova Bay, which is

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New Floating Drydock at Tivat, Yugoslavia (S)

A new floating drydock was seen at Tivat Naval Base and Shipyard, Yugoslavia, on overhead imagery of early September 1980. This new dock was probably acquired to replace an older floating drydock which was severely damaged by what appeared to be an accidental sinking in 1978. The new dock arrived at Tivat [redacted]

[redacted] but it was still not in service [redacted]
[redacted] We cannot determine where the dock was built. (S [redacted])

The new dock is 116 meters long and 24 meters wide. Its wing walls are 100 meters long, about 8 meters high, and about 3 meters wide, and its working deck—the space between the wing walls — is 18 meters wide. These dimensions indicate that the dock's lifting capacity is about 4,500 tons.

(S [redacted])

Like the older dock, the new dock is capable of being used to overhaul submarines. The damage to the older dock had restricted the shipyard to only one out-of-water repair position which could be used for submarine repair—a Soviet-built, 12,000-ton-capacity dock normally used to repair larger surface ships. The new dock probably will be used to repair Soviet F-class submarines operating with the Soviet Mediterranean Squadron. Soviet F-class submarines and submarine tenders have been routinely repaired at Tivat since the mid-1970s. The Libyan Navy has also used Tivat to repair its F-class submarines. (S [redacted])

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Ship Repair Yard Under Construction in North Korea (S)

A ship repair yard—which will contain North Korea's largest graving dock—is in the early-to-mid-stages of construction on the Taedong-gang River about 10 kilometers downstream from Nampo. The repair yard will probably be used principally for commercial ships, although the North Koreans may also use the new facility for occasional repair of their larger combatants. The only other operational graving dock on North Korea's west coast—at Tasa-ri—is used exclusively by the Navy. (S [redacted])

Construction of the repair yard probably began in early 1979. By late September 1980, the graving dock was nearing completion. No caisson gate for the dock had been seen by that time, but one will probably be assembled at Nampo Shipyard and floated down the Taedong-gang to the yard. When the caisson gate is emplaced, probably soon, the dock will be ready for limited use. Cranes have not yet been erected near the dock, and construction of support facilities continues. (S [redacted])

The graving dock will have a usable length of about 198 meters and a width of 28 meters. On late September 1980 imagery, the floor of the dock was obscured by water, so the depth of the dock could not be determined. Analysis suggests that the depth is probably 10 to 12 meters—meaning that the dock could accommodate a ship with a draft of 8 to 10 meters. (S [redacted])

Operation of the new ship repair yard may present problems for the North Koreans. The approaches to the dock will probably have to be dredged periodically to keep them free of silt and to prevent the encroachment of the adjacent mud flats. In addition, tidal fluctuations of the Taedong-gang will restrict the times during which ships can enter or exit the dock. (S [redacted])

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New OIA Publications

The following reports have been published by the Office of Imagery Analysis since the last issue of the *Imagery Analysis Monthly Review*

Imagery Research Papers

1. IS 80-10095K, [REDACTED] *Status of Air Defense Missile Systems in Eastern Europe*, August 1980 25X1
(Top Secret RUFF [REDACTED]) 25X1

Imagery Analysis Memorandums

1. IS 80-10151K [REDACTED] *New-Type Telemetry or Missile Tracking Antennas. Tyuratam and Nakhoksa Missile Test Centers* (Top Secret RUFF [REDACTED]) 25X1
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2. IS 80-10136K [REDACTED] *Estimated Dimensions of the SS-NX-17 Missile Derived From Its Load Simulator* (Top Secret RUFF [REDACTED]) 25X1
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3. IS 80-10130K [REDACTED] *SS-18 Mods 1- 3 Payload-Related Ground Support Equipment* (Top Secret RUFF [REDACTED]) 25X1
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[REDACTED] 25X1

5. IS 80-10153, *New-Technology Oil Shale Processing Plant, Narva, USSR* (Secret [REDACTED]) 25X1
[REDACTED] 25X1

6. IS 80-10161J [REDACTED] *Status of Chinese Ground Forces Along the Laos and Vietnam Borders, July 1980* (Top Secret RUFF [REDACTED]) 25X1
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7. IS 80-10154K [REDACTED] *Indications of Operational Activity at the Guangyuan Plutonium Production Plant, China—January 1977 through May 1980* (Top Secret RUFF [REDACTED]) 25X1
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8. IS 80-10160K [REDACTED] *Soviet Deliveries of Outdated Military Equipment to Cuba* (Top Secret RUFF) 25X1

[REDACTED] 25X1

11. IS 80-10175, *Status of South African Coal Gasification-Liquefaction Facilities (SASOL)* (Secret [REDACTED]) 25X1
[REDACTED] 25X1

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